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Conſiderations on the Natural Hiſtory of the Earth and it's Minerals.

SERMON, &c.

BRITISH MUSEUM

Conſiderations on the Natural Hiſtory of the Earth and it's Minerals.

A THIRD
SERMON
PREACHED AT THE
CHURCH of ST. LEONARD, SHOREDITCH,

On the TUESDAY in WHITSUN-WEEK,
JUNE 6, 1786,

Being a SEQUEL to TWO DISCOURSES, the one on BOTANICAL PHILOSOPHY, the other on the OECONOMY OF BEASTS AND CATTLE.

K

BY WILLIAM JONES, M.A.
FELLOW OF THE ROYAL SOCIETY.

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M.DCC.LXXXVII.

BRITISH MUSEUM

DEDICATION.

TO THE

REVEREND **GEORGE HORNE**, D. D.

DEAN of CANTERBURY, and PRESIDENT of MAGDALEN COLLEGE, OXFORD.

DEAR AND REVEREND SIR,

MY firſt Sermon at *Fairchild*'s Lecture was offered to the Preſident of the Royal Society, who is deſervedly placed at the head of Botany, and of all other natural ſciences. My ſecond to *John Frere*, Eſq. by whoſe kind encouragement I entered upon this courſe of preaching; for the trouble of which I find myſelf amply rewarded by the attention which hath been paid to my two former Diſcourſes.

You will give me leave, I hope, to gratify myſelf, by preſenting the third to the Friend and Companion of my earlieſt ſtudies. When I look back upon my paſt life, there are no hours, on which I can reflect, with ſo much pleaſure, as on thoſe, which were ſpent in your company; when we raiſed our thoughts from the poets and orators of Greece and Rome, to the contemplation of the Great Creator's wiſdom in his word, and in his works.

How happily you have ſucceeded, and how greatly to the benefit of the public (if it be not their own fault) your works will teſtify. I dare not indulge myſelf with deſcending to particulars, leſt the language of my heart ſhould be more than your ears will bear, with pleaſure, or patience. But this I will not ſpare to ſay in general, that although I am devoted to the pleaſures of rural retirement, my eye never found more delight from the returning verdure of the ſpring and the ſummer, than my mind hath received from many of your productions. That alſo, in which you have ſo powerfully recommended to us the duty of *contending for the faith once delivered to the ſaints*, and which is juſt now come to my hands, is not inferior to the reſt: and I am happy to find, that you have ſomething farther in ſtore for us, upon the ſame ſubject. As the light of the heavens gives ripeneſs to the fruits of the earth, may the divine grace and bleſſing bring to perfection every good work you have in view, for the preſervation and increaſe of our common faith. Accept of this, as the devout wiſh of,

SIR,

Your moſt faithful,

and affectionate Friend,

and Brother in Chriſt,

Nayland,
Jan. 1, 1787.

WILLIAM JONES.

A
SERMON, &c.

GENESIS I. 9, 10.

And God ſaid, Let the waters under the heaven be gathered together unto one place, and let the dry land appear: and it was ſo. And God called the dry land Earth, and the gathering together of the waters called he Seas: and God ſaw that it was good.

THE earth is generally conſidered as the place of man's habitation, and the theatre of thoſe various actions which have filled the pages of hiſtory. When we take the earth in this ſenſe, we find it a bad and a troubleſome world, a ſcene of error and confuſion, in which the exploits of the miſchievous bear away the prize from the actions of the virtuous, and the moſt wicked of men are celebrated as the benefactors of mankind. Here warlike nations have extended their borders, and erected kingdoms, which appeared in great ſplendor, for a time, to ſerve the purpoſes of God's providence, and then vaniſhed away like a fiery meteor of the night. Here have buſy men, by fraud and violence, obtained large poſſeſſions, which ſoon changed their owners; and raiſed magnificent buildings, which are fallen into the duſt. Thus do all the works of men upon earth paſs away, while the earth itſelf, which is the work of God, and is innocent of all the evil that is done upon it, ſtandeth ſure, and his building ſuffereth no decay.

This is the earth which I would now propoſe to your conſideration: the natural hiſtory is very different from it's political; and, I truſt, we ſhall find it both an agreeable and an edifying ſubject.

Writers, who have given us deſcriptions of the natural world, have divided it into three grand departments or kingdoms, of *plants*, *animals*, and *minerals*. Of plants and animals I have treated in two former diſcourſes; and I ſhall proceed now to the conſideration of the earth and it's minerals; in which we ſhall every where ſee the moſt evident proofs of the wiſdom and goodneſs of God, and by which the truth of his revelation will be illuſtrated and confirmed.

I ſhall enter into no curious theories: nor will there be any occaſion for it. The great outlines of nature are fitteſt for all the purpoſes of chriſtian edification. The plaineſt things, and ſuch as are beſt underſtood by every capacity, are generally the moſt wonderful, and the moſt improving to the mind that meditates upon them. Where there is much curioſity and difficulty, there is frequently leſs profit.

The words of the text relate the generation or birth of what is called *the Earth*; that immenſe body of land and water, which human writers call *the terraqueous globe*: from which we learn, that, as the *dry land* did not *appear* till the *waters were gathered together*, the land was formed under water. The wiſdom of this mode of formation is evident; although the progreſs of it muſt be above our comprehenſion. For in water all the materials of the earth were eaſily moved; and by means of water, ſolution, ſeparation, aſſociation and ſubſidence are manifeſtly promoted; and accordingly, by thoſe who dig into the earth, it's ſolid materials are found to be duly *ſorted*, and have the appearance of a *ſediment*, which had once floated in water, and afterwards ſettled out of it. And if the ſtrata of the earth in mountains are not now parallel to the horizon, but often very oblique, and ſometimes nearly perpendicular, yet the conſtruction of ſuch maſſes ſhews that they had ſettled in a regular form, and were brought by ſome force afterwards to their preſent ſituation.

As the earth appears to have been formed under the waters, it is as manifeſt, to every attentive obſerver, that the waters did once retire from the whole ſurface of the earth. When we compare ſmall things with great, we find, that as the land, and the channels of rivers, are worn into precipices, pits, and winding furrows, by the departure of *occaſional* inundations, ſo the ſurface of the earth, upon a ſcale proportionably larger, doth every where preſent to the ſight the effect of deſcending waters. From the tops of the higheſt mountains, it is furrowed with channels; which, meeting others in their deſcent, grow wider and deeper, and wind about, as water doth in it's progreſs, till they fall into the bed of ſome river,

or

or lead us down to the ſea, into which they retired when they ſubſided from the land.

From this retiring of the waters, we derive the inequality of the earth's ſurface: and to that inequality we owe the generation of ſprings and rivers, the feeding of metallic ores and minerals in the fiſſures of the earth, and the regular draining off of waters, with an uninterrupted courſe, toward the ſea. And to the great water-courſes of the earth we owe moſt of thoſe proſpects which delight the eye. The waters, which once covered the earth, having forced their way down to the ſea, left a way open for other waters ever after, over the whole face of the earth. Let the ſtream ſtart from the higher grounds, and it will no where be detained till it falls into the ocean; which is a wonderful proviſion of divine providence, though not commonly attended to; and how it could have been brought to paſs by any other mode of formation but that related in the Scripture, doth not appear. The elegant ſerpentine diſpoſition of vallies, occaſioned by the deſcent of water, conſtitutes the chief beauty of our proſpects. Where the ſoil is ſoft and moveable, theſe cavities are eaſy and gradual, and the bottoms are rich with the vegetable matter which has been waſhed off from the higher grounds. But in lands of an harder texture, rocks are undermined and overthrown; frightful precipices are formed by their fractures; and the vallies are rough with ſtones and rubbiſh. Yet we are no loſers; for here the lines of nature are bolder. Where the face of a country is abrupt and irregular, it becomes ſublime and magnificent; as a building in ruins makes a better picture, and is a fitter ſubject for a painter than where it has a flat and regular face. A new building, which is the production of human art, hath a littleneſs about it, from the uniformity of it's lines; but when time and the elements have done their work upon it, it approaches nearer to the grandeur of nature.

The ſea, conſidered in itſelf, with the periodical motion of it's tides, and it's occaſional commotions by winds and ſtorms, gives us a ſtupendous idea of the power and greatneſs of God; who hath this raging element ſo much under his command, that he is repreſented to us as holding the ſeas and waters of the world in *the hollow of his hand*. Nor is his goodneſs leſs evident than his power: for the agitation of the ſea, by the daily reciprocations of the tides, contributes to the purity and wholeſomeneſs of the air; the labour of man is aſſiſted by the advance and retreat of the waters through tracts of inland country. The ſea, which ſeems to divide the inhabitants of the world from each other, keeps up an intercourſe more effectually between the moſt diſtant parts of the globe. Mankind are likewiſe abundantly fed by the waters of the ſea; wherein the creatures of God multiply in a much greater proportion than by land, and are all maintained without the coſt or attendance of man: they are a ſingular flock, which have no ſhepherd but the Creator himſelf, who conducts them, at different ſeaſons, in unmeaſurable ſhoals, to ſupply the world with nouriſhment.

From this haſty ſurvey of the earth, we cannot but be ſtruck with the many ends which are anſwered by the generation of the earth from the waters of the ſea, although we have conſidered but a part of them.

When we examine the ſubſtance or matter of the earth, we find all things uſeful, all adminiſtring various ways to our ſupport and convenience. Even the very dirt we tread upon, is a compoſt of rich principles, which ſupply the neceſſary nouriſhment to plants: and when particles from an offenſive putrid maſs of earthy matter are diffuſed through the frame of a vegetable, they put on an appearance of beauty, which is dazzling to the eyes, and emit a fragrance, which is raviſhing to the ſenſe. If ſuch a thing had not yet been, and we were told that it would be, mortals affecting wiſdom would have ſignified their doubts; as when it was queſtioned *what the riſing from the dead ſhould mean*.

Below the ſurface of the earth, we find the various ſorts of ſtones; the ores of metals and minerals; and the ſtones which are called *precious*, from their beauty and rarity. The common uſes of ſtone in building, and the ſeveral degrees of them from the coarſeſt rock to the fineſt marble, are well known: but ſtill, the ſituation of ſtone, as it lies in the earth, with the property of that ſtone which is moſt ordinary, are worthy of particular conſideration. Beds of ſtone, as they lie in the quarry, are parted here and there with perpendicular cracks, by means of which the largeſt maſſes become acceſſible, and ſubject to ſuch forces as will ſeparate and raiſe them up: and unleſs the beds of ſtone had been thus naturally parted, all the art of man would have been inſufficient to extract ſtones from the earth, for the common uſes of life. Some are of ſuch a grain, that they will ſplit like wood, and may be ſhivered, even without a tool, into thin plates, by the force of the weather. But wonderful above all is the property of the limeſtone; which, when it's native moiſture is totally expelled by fire, imbibes water with ſuch force that it falls into an impalpable powder, and forms a cement by which ſeparate ſtones are indiſſolubly joined into one body: and it holds them together more firmly at the end of a thouſand years than it did at firſt. This is a diſcovery of ſuch importance in the art of building, that it is probably as ancient as the art itſelf. The uſe of ſtone and mortar is ſpoken of as known before the building of *Babel:* and how it could be found out, doth not appear; becauſe, I think, there is no operation in the common courſe of nature which could lead to it.

It would anſwer no purpoſe here to recount the various ſorts of opaque ſtones; ſome curious for their beauty, others excellent for their uſe. The flint enables us to produce fire, of which no creature but man hath the uſe and management. The fierceſt of wild beaſts fly from the ſight with terror; and dread that fire which is kindled by man, as man himſelf dreads the fire of lightning which is ſent from heaven.

In regard to the common ſtones of the earth, there is a certain fact which muſt excite the curioſity of thoſe who attend to it. Of the pebble kinds, the greater part are formed out of fragments of ſtone, ſpar, and marble, rounded by trituration in water; of which kind millions are agitated to and fro, and worn by the motion of the tides upon the ſhores of the ſea. The inland parts of the earth, to the greateſt depths, contain theſe pebbles; which, being the production of the ſea, could never have been formed where they are found, and muſt, therefore, have been originally lodged by water in places which are now remote from the ſea. The ſame may be ſaid of an immenſe quantity of ſand, which, though it is now lying in dry beds of earth, has the certain marks of trituration by water.

Metals and minerals, which are the more valuable productions of the earth, are, in form and appearance, but another kind of ſtones; under which name they are mentioned in the book of Deuteronomy; where Moſes commends the promiſed land to the people, as a land whoſe *ſtones are iron*, and out of *whoſe hills they might dig braſs*; not in the *form* of *braſs*, but of *ſtones*, out of which braſs might be extracted, and compounded by the labour of man, and the rules of art. All the treaſures of the earth are found in an imperfect ſtate, which calls for the arts of chemiſtry, and makes work for the fires of the refiner: but, when due pains have been beſtowed upon them, then we diſcover what a pure and ſplendid nature is given to them by the Creator. Who would think, that burniſhed gold, and poliſhed ſteel, ſhould have been in an obſcure ſtate, like the ſtones of the earth? The mind of man, improved by education, is juſt as different from the ſame mind in the ſtate of nature.

Such is the richneſs and brightneſs of the ſeveral kinds of metals, that it hath been the cuſtom with men, from time immemorial, to give to the metals of the earth the ſame names as to the lights of heaven, according to their *colour* and their *dignity*. Gold is allied to the *ſun*, from it's yellow colour, and it's ſplendor; ſilver to the *moon*, from it's whiteneſs, and as being next in dignity to the ſun. Mercury or quickſilver takes it's name from the planet neareſt to the ſun; copper from the planet next in order: iron, tin, and lead, were given to the remaining planets more remote from the ſun.

The natural hiſtory of the metals ſeems to have had a conſiderable ſhare in the mythological myſteries of heatheniſm.* But leaving theſe fanciful doctrines of men, who gave the honour of God's works to their idols; we may go on from the metals to the gems, which are of an higher order, and a more refined nature. Here the *glory of the terreſtrial* approaches very near to the glory of the celeſtial bodies; eſpecially in the diamond, the prince of precious ſtones; which vies in purity and brightneſs with the matter of the heavens, and appears like embodied light; inſomuch that, if the fluid of light could be fixed into an ice, as the fluid of water is, we may imagine that ſomething like the diamond would be produced. It is remarkable, that the *brighteſt* matter of the earth is united with the *richeſt*, for the formation of a precious ſtone; the various ſorts of which receive their colour from ſome metal; as the *ruby* from *gold*; the *emerald* from *copper*; whence emeralds were commonly found in the copper mines of Cyprus †. When the metals are united to a cryſtalline, or *pellucid* baſis, they form a gem: but, if to an opaque earthy matter, they form the high coloured

earths

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* *Copper* had it's name from the iſland of *Cyprus*, where the uſe of braſs was ſaid to have been firſt invented: (In Cypro, ubi prima fuit æris inventio. Plin. Lib. 34, cap. 2.) and hence we may account for the myſtical dedication of that iſland to *Venus*, the *Cyprian* goddeſs, (Diva potens Cypri. Hor.) who agrees in name with a *planet* in the heavens, and with the ore of *copper* in the earth. On this plan, it is very probable that the fable of *Jupiter*'s burial in the iſland of *Crete* might, at the bottom, be nothing but a mythological mode of ſignifying to thoſe who were in the ſecret, that *tin* was found under ground in that iſland.

† Theophraſtus.

earths of the painters, which all derive their beauty from ſome metallic mixture. It is farther remarkable, that the cryſtalline matter, and the metal which gives it colour, are united in nature by the mediation of water: whereas, if we attempt to unite them by art, in the artificial gems, we are obliged to have recourſe to the violence of fire, to diffuſe the colouring parts through the cryſtal. This, and ſome other like inſtances of the difference between the chemiſtry of art and the chemiſtry of nature, ſhould make us cautious of pronouncing too haſtily concerning ſubterraneous productions; leſt we take that for the effect of fire, which was, in reality, the effect of water.

Inſtead of naming the ſeveral minerals which are dug out of the earth, I ſhall rather direct your attention to two which are of more conſequence than the reſt; theſe are *ſalt* and *ſulphur*. Salt preſerves from putrefaction; and, being ſoluble in water, it keeps the ſea ſweet and wholeſome. Where the heats are greater, the ſea has more ſalt, becauſe there is more danger of putrefaction; which teaches us, that the ſea was not ſalted *by accident* but *by deſign* *. As the doctrine of truth in the Goſpel ſaves the world from moral corruption, ſo doth ſalt preſerve it from natural corruption; whence the one is uſed as a figure of the other. *Ye are the ſalt of the earth*, ſaid Chriſt to his preachers: without you, the world would be as putrid as fleſh is found to be without the uſe of ſalt.

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* The late Dr. *Halley*, ſuppoſing that the ſea grew ſalt by accident, in tract of time, from the waters waſhing away ſome ſalt from the land, propoſed a new method for finding the age of the world, from the ſaltneſs of the ſea. See *Phyſ. Diſq.* where ſome farther obſervations are made on this ſubject.

The other *mineral* ſubſtance is ſulphur; of univerſal effect, as the cement of nature for *uniting the parts of metals into maſſes*, or *mineralizing* them, and giving them many of their properties. It is alſo the grand combuſtible of the world; which, as it deſcended from the heavens in rain for the deſtruction of Sodom, ſo is now the chief cauſe of thoſe dreadful commotions which happen in the earth. When iron and ſulphur and water meet together, a fermentation enſues, which, if ſtrong enough, breaks out into actual fire and flame. It hath pleaſed God, for wiſe ends, to lodge theſe different principles near to each other, in many places, that their mixture may preſent to our ſight one of the moſt tremendous appearances in nature. When the ſun ſhines upon the calmneſs of the ocean, we underſtand that God is benevolent as well as great; and, when the volcano rages, we are to learn that he is juſt and terrible in his wrath and vengeance. When the law was given on mount Sinai, the whole mount trembled, and burned with fire, and there were thunders and lightnings and a thick cloud upon it. Here were all the appearances of a volcano; and, as this manifeſtation of God at Sinai was intended to fill the hearts of the people with the fear of God, by ſhewing them how terrible he is in his judgment againſt thoſe who break his law; ſo every burning mountain, at this day in the world, ſhould inſpire the ſame religious fear; and, I believe, generally does, to thoſe who are ſpectators of it; declaring to the world, that God is the avenger of ſin; and that the fires of nature, which are now but partial, and under the reſtraint of mercy and forbearance, ſhall at length break out to the burning of the earth and of all things therein. When the flood came upon the world, the fountains of the great deep were opened; the waters of the air were added to the waters of the earth, and all united their forces to execute the divine ſentence: ſo, at the laſt viſitation of this world, all the fountains of fire ſhall be opened; the burning mountains of the earth ſhall ſend forth all their hidden ſtores, while new ones ſhall be opened in all places; and the fires of the ſky ſhall co-operate with the fires of the earth. Modern diſcoveries have taught us, that the ſea, the earth, the air, the clouds, are replete with a ſubtile and penetrating matter, which, while at reſt, gives us no diſturbance; but, when excited to action, turns into a conſuming fire, which no ſubſtance can exclude, no force can reſiſt: ſo that the *elements*, which are to *melt with fervent heat*, want no accidental matter to inflame them: ſince all things may be burnt up by that matter which now reſides within them, and is only waiting for the word from it's Creator.

All the phænomena of nature ſpeak ſome religious truth to thoſe who have ears to hear their voice. When we ſay this, we do not deny that volcanos may have a natural uſe in purging the earth and giving vent to combuſtible principles, which, if wholly confined, might ſhake and ſhatter the earth to pieces before the time. Theſe things are very conſiſtent, becauſe the wiſdom of God works for many different ends by the ſame means.

A review of the earth and it's contents, however ſhort and imperfect, muſt inſpire us with an awful ſenſe of the divine power and wiſdom. But we are not to ſtop there: the natural hiſtory of the earth bears an unanſwerable teſtimony to the truth of revelation; and we ſhould never fail to apply it to that purpoſe, when an opportunity offers. The Scripture, which tells us that this earth, on which we live, is now under ſentence to be deſtroyed by fire, doth alſo teach us, that it hath been once deſtroyed already by water: of which deſtruction the earth ſtill bears ſuch evident marks, that the belief of it is as obvious to every obſerver of nature, as it is neceſſary to a Chriſtian. From the ſurface of the earth we underſtand, that the whole was once under water; which deſcended, with an accelerated velocity, from the land to the ſeas, toward which all the furrows of the earth are directed, and in which they terminate. Then, if we ſearch under the earth, we find, that as man is not in the ſtate in which God firſt made him, but fallen into diſorder and ſinfulneſs; ſo the earth has undergone ſome natural revolution, which, in part, diſſolved it's ſubſtance, and lodged within it ſuch bodies as muſt have been the remains of a former earth, becauſe they could not poſſibly be the productions of the preſent. Bones of animals, ſhells of fiſhes, fruits of trees, are found buried at all depths, and even in the midſt of the hardeſt ſtone and marble. Whence we are to argue; 1. That theſe bodies were tranſported and depoſited by a flood of waters, becauſe moſt of them belonged to the ſea. 2. That the matter of the earth muſt have been in a ſtate of ſolution when this happened; becauſe it could not otherwiſe have incloſed ſea ſhells, and filled up their cavities through the ſmalleſt apertures. 3. That the flood was *general*, or common to the *whole world*; becauſe theſe monuments of it are found in all countries of the earth; on the higheſt mountain, and in tracts moſt remote from the ſea.

To account for a diſorderly ſituation of things, out of their ſeveral places, under ground, we muſt apply to *water* or to *fire*; which two are the cauſes of all the changes in this globe. We cannot apply to ſubterraneous fire, becauſe here is an effect which is univerſal, and ſubterraneous fire is a cauſe but partial and occaſional; the marks of which, when compared with thoſe of water, are but of ſmall extent*. Beſides, fire would have deſtroyed bodies which water preſerved; ſuch as the tendereſt ſhells, the ſkins of ſcaly fiſh, the fruits and leaves of vegetables. All theſe would bear drowning and burying, but could never ſurvive the devaſtations of fire. How could fire tranſport the productions of all climates into one place? But if they floated on water, ſubject to winds, tides, and currents, ſuch a thing might eaſily be: accordingly, we find the fruits of the Eaſt and Weſt-Indies; bones, teeth, and ſhells from fiſh of different ſeas; the elephant of Africa, the tortoiſe of America, all near to one another in the ſame ſpot,† as if laid up for a teſtimony to the truth of the Holy Scripture, which alone gives us a faithful account of this great revolution in nature. When we are informed, that the earth we now inhabit is the *burying-place* of a former earth, it is as reaſonable that we ſhould dig up the remains and ruins of it, as that we ſhould find the bones and coffins of former generations in the earth of a church-yard.

Our ſubject will become more edifying, if we examine what uſe hath been made of ſome parts of it in the Scripture.

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* The effects of fire, compared with thoſe of water, may perhaps be nearly in the ſame proportion, as the forge of the ſmith, with it's ſlags and cinders, when compared with the lands of the whole pariſh.

† What is here ſaid is verified in the iſland of *Sheepy* in *Kent*.

1. Thus, for example, every man is to conſider himſelf as clay in the hands of a potter, and to ſubmit himſelf, with reſignation, to the appointment of God, who gives to all men their proper ſtations and uſes in life, as the potter forms ſome veſſels to mean, and ſome to honourable, offices: and it is as vain for any man to quarrel with the ordination of heaven, and throw himſelf out of that ſphere of life in which God hath placed him, as for the clay to murmur againſt the deſign of the potter. There is an ancient fable of Eaſtern original, (for the ſon of *Sirach* hath it *) which relates the folly of the veſſel of earth in joining itſelf to the company of the veſſel of braſs; in conſequence of which it was broken to pieces.

2. The treaſures of the earth are buried within it; ſo that they cannot be diſcovered and brought forth without the labour of man: yet they are not placed ſo deep, as to render our labour ineffectual. Thus hath God ordained in every other caſe: nothing, but what is worthleſs, is to be found by the indolent upon the ſurface of life: every thing valuable muſt be obtained by labour: all wiſdom, all ſcience, all art and experience, are hidden, at a proper depth, for the exerciſe of the wiſe; and they, who do not ſpare their labour, ſhall not be diſappointed in their ſearch. The treaſures of wiſdom, in the word of God, do not lie upon the ſurface of the letter, for every ſuperficial reader to obſerve them: therefore where it is ſaid, *Search the Scriptures*, the word implies that laborious kind of ſearching, by which the treaſures of the mine are diſcovered under ground.

3. The properties of metals are very conſiderable, and would afford us much inſtruction, if the limits of this diſcourſe would

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* Ecclus: xiii. 3.

admit of it. As gold ſtands the teſt of fire, ſuch is the conſtancy of true piety, which grows brighter and purer with every trial. And, as gold cannot be pure without being refined in the furnace, ſo cannot any man be fit for God's acceptance, till he hath firſt *endured temptation*. The father of the faithful was put to the fiery trial of offering up his own ſon for a ſacrifice, that he might be an example to all his children; to whom this warning is given by the ſon of *Sirach*, *My ſon, if thou come to ſerve the Lord, prepare thy ſoul for temptation—for* gold *is* tried in the fire, *and acceptable men in the furnace of adverſity.** I ſuppoſe this rule to be ſo certain, that human life never did, nor ever will, admit an inſtance to the contrary.

4. In the viſion of Nebuchadnezzar, king of Babylon, the four great monarchies of the world are ſignified by the four principal metals, gold, ſilver, braſs, and iron. The Aſſyrian monarchy has the pre-eminence, as well in dignity as in order of time, and is compared to gold. *Thou*, ſaid the prophet Daniel to Nebuchadnezzar, *art this head of gold:* from which interpretation, his *image* of gold ſeems to have been preſumptuouſly derived; the proud king, not content with being the head, aſſumed to himſelf the whole body of worldly empire.

As ſilver, braſs, and iron, have leſs value than gold, the monarchies of Perſia, Greece, and Rome, which ſucceeded, muſt have had leſs ſplendor and dignity than the Aſſyrian; and the Roman muſt have been the baſeſt of all, if the Scripture is juſt in it's compariſon. If we were to enter into the queſtion, how kingdoms are debaſed, we might obtain ſome light from the caſe of the Roman empire, as it is ſtated in this prophecy. This empire then, though ſtrong as *iron* in war, was of a baſer nature than thoſe which preceded, becauſe it was unnaturally compounded of *miry clay* mixed with it's iron; which two would never incorporate. It was compounded of *military power* and *popular authority*; to unite which, all attempts were unſucceſsful; and, conſequently, with all that hardneſs of iron, with which it *bruiſed* and *broke in pieces* other nations, there was a conſtitutional weakneſs; by reaſon of which, it was vexed and broken at home with eternal balancings and diviſions: and, when it had conquered the world, it became it's own executioner. The words of this prophecy are very remarkable, when applied to the character and conſtitution of the Roman ſtate. It was *partly ſtrong* as iron in military force, and *partly broken*, from this unnatural mixture in the materials of it's government. By the mingling of *iron* with *miry clay*, as it is interpreted for us by the prophet, it was ſignified, that they of this kingdom ſhould *mingle themſelves with the ſeed of men, and not cleave to one another, even as iron is not mixed with clay*. Imperial power, in the Scripture, is a divine inſtitution, of heavenly original; and to ſuppoſe it an human thing, and derive it from the power of the people, as the Romans did, is to mingle it with the ſeed of men, and debaſe the nature of it; of which the certain conſequence is diſunion and weakneſs: for no ſtate can be ſtrong in itſelf, which is founded on principles ſubverſive of God's authority. Under the Aſſyrian monarchy, and the Perſian, and the kingdoms of Greece, in the age of Homer, there was no queſtion concerning the origin of power: it aroſe afterwards amongſt the Greeks; and the popular ſcheme attained it's higheſt degree of abſurdity under the Romans. Would to God it had never found it's way amongſt Chriſtians; where it has done infinite miſchief, and will probably continue ſo to do, till it has undermined the peace of all mankind, and unhinged the whole political world. Majeſty, when it is in kings, is where God hath placed it: honour is then in the fountain of honour: but the *majeſty of the people*, which the enthuſiaſtic vanity of the Romans hath ſo magnified, and in which they have been followed, for ſelfiſh ends, by libertines and deiſtical philoſophers, is contrary to all the ideas of revelation, and is inconſiſtent with common ſenſe. A *people* may ſeem to themſelves to riſe higher, as the *power of government* ſinks lower; but it is all a deception; for nothing can be more evident, than that nations are debaſed, in the eſtimation of the world, by the doctrines of anarchy. For which of the two is the moſt reſpectable; the houſe wherein there is a proper reſpect kept up; or that wherein there is none? The family of the nobleman, whoſe domeſtics are under his authority, preſerves an appearance of greatneſs and elegance: but the publick houſe, where the people who fill it are upon a level with the houſeholder, is a ſcene of vulgarity and diſorder.

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* Ecclus: ii. 1—5.

5. And now, what ſhould be the end of all our reſearches into Nature and the Scripture, but to delight in giving God the honour that is due to him? For his pleaſure all things were made; and he will be pleaſed with men when they glorify him in his works. We ſhould therefore call upon all nature to join with us in a Pſalm of praiſe and thankſgiving, after the example of the royal prophet: *Praiſe the Lord ye*

mountains and all hills, fruitful trees and all cedars, beaſts and all cattle—Let the heavens rejoice and let the earth be glad; for the name of the Lord is excellent, and his praiſe is above heaven and earth.

To Him therefore, *&c.*

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